COST SUMMARY WORK

Task description: **Cost Summary of Reclamation Tasks**

Site: **Stones Ranch Grav Pt** Permit Action: 2023 Conversion M1991080 Permit/Job#: M1991080

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 12/15/2023 County: Teller Filename: M080-000
User: ERR

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Grade Flat Pasture Area (8.63 Acres)	GRADER	1	4.65	$1,148
002	Shape/Grade Slope Area (11.37 Acres)	GRADER	1	9.89	$2,441
003	Replace Growth Medium on Sloped Area	DOZER	1	9.28	$3,119
004	Revegetate Sloped Area	REVEGE	1	17.06	$9,854
005	Mob/Demob of Reclamation Equipment	MOBILIZE	1	5.32	$4,950
	SUBTOTALS:			**46.2**	**$21,512**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$435
Performance bond:	1.05	Total =	$226
Job superintendent:	23.10	Total =	$1,831
Profit:	10.00	Total =	$2,151
		TOTAL O & P =	$4,643
		CONTRACT AMOUNT (direct + O & P) =	$26,155

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	$0	Total =	$0
Engineering work and/or contract/bid preparation:	0.00	Total =	$0
Reclamation management and/or administration:	5.00		$1,308
CONTINGENCY:	3.00	Total =	$645
		TOTAL INDIRECT COST =	$6,596
		TOTAL (direct + indirect) =	$28,108
		TOTAL BOND AMOUNT (rounded) =	**$28,100**

MOTOR GRADER WORK

Task description: **Grade Flat Pasture Area (8.63 Acres)**

Site: **Van Egmond Stone Pit** Permit Action: 2023 Conversion M1991080 Permit/Job#: M1991080

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 12/15/2023 County: Teller Filename: M080-001
User: ERR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 14M Horsepower: 259
Ripper Attachment: Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$129.81	NA
Operating Cost/Hour:	$89.13	100
Ripper Ownership Cost/Hour:	$0.00	NA
Ripper Operating Cost/Hour:	$0.00	
Operator Cost/Hour:	$27.76	NA
Total Unit Cost/Hour:	$246.70	

Total Fleet Cost/Hour: **$246.70**

MATERIAL QUANTITIES

Total Area to be graded or ripped: 8.63 acres

Source of estimated acreage: Application

HOURLY PRODUCTION

Average Grader Speed: 1.50 mph
Selected Application: Finish grading (0-2.5 mph) - 1.5
Selected Blade Angle: 0 degrees
Effective Blade Length: 14.00 feet
Width of blade overlap per pass: 2.00 feet
Net grading or ripping width per pass: 12.00 feet
Unadjusted Hourly Unit Production: 2.1818 acres/hour

Job Condition Correction Factors Site Altitude: 8315 feet

		Source
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.85	(1sh/d, mod.)
Net Correction:	0.8500	multiplier

Adjusted Hourly Unit Production: 1.8545 acres/Hour
Adjusted Hourly Fleet Production: **1.8545** acres/Hour

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **4.65** Hours

Unit cost: $133.02 per acre Total job cost: **$1,148**

MOTOR GRADER WORK

Task description: **Shape/Grade Slope Area (11.37 Acres)**

Site: **Van Egmond Stone Pit** Permit Action: 2023 Conversion M1991080 Permit/Job#: M1991080

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 12/15/2023 County: Teller Filename: M080-002
User: ERR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: CAT 14M Horsepower: 259
Ripper Attachment: Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$129.81	NA
Operating Cost/Hour:	$89.13	100
Ripper Ownership Cost/Hour:	$0.00	NA
Ripper Operating Cost/Hour:	$0.00	
Operator Cost/Hour:	$27.76	NA
Total Unit Cost/Hour:	$246.70	

Total Fleet Cost/Hour: **$246.70**

MATERIAL QUANTITIES

Total Area to be graded or ripped: 11.37 acres

Source of estimated acreage: Application

HOURLY PRODUCTION

Average Grader Speed: 1.50 mph
Selected Application: Finish grading (0-2.5 mph) - 1.5
Selected Blade Angle: 45 degrees
Effective Blade Length: 9.90 feet
Width of blade overlap per pass: 2.00 feet
Net grading or ripping width per pass: 7.90 feet
Unadjusted Hourly Unit Production: 1.4364 acres/hour

Job Condition Correction Factors Site Altitude: 8315 feet

		Source
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.80	(1sh/d, adv.)
Net Correction:	0.8000	multiplier

Adjusted Hourly Unit Production: 1.1491 acres/Hour
Adjusted Hourly Fleet Production: **1.1491** acres/Hour

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **9.89** Hours

Unit cost: $214.69 per acre Total job cost: **$2,441**

BULLDOZER WORK

Task description: **Replace Growth Medium on Sloped Area**

Site: **Van Egmond Stone Pit** Permit Action: 2023 Conversion M1991080 Permit/Job#: M1991080

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 12/15/2023 County: Teller Filename: M080-003
User: ERR

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU
Horsepower: 310
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$173.32	NA
Operating Cost/Hour:	$109.71	100
Ripper own. Cost/Hour:	$14.53	NA
Ripper op. Cost/Hour:	$0.00	0
Operator Cost/Hour:	$38.59	NA

Total unit Cost/Hour: $336.15
Total Fleet Cost/Hour: **$336.15**

MATERIAL QUANTITIES

Initial Volume: 3,058
Swell factor: 1.250
Loose volume: **3,823** LCY

Source of estimated volume: Application: 2" on 11.37 Acres
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 200 feet
Unadjusted hourly production: 491.9 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: -30 %
Average site altitude: 8,315 feet

Material weight: 2,650 lbs/LCY

Weight description: Decomposed rock - 25% Rock, 75% Earth

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.100	(50% SL)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8374

Adjusted unit production: 411.92 LCY/hr
Adjusted fleet production: **411.92** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.816/LCY

Total job time: **9.28** Hours
Total job cost: **$3,119**

REVEGETATION WORK

Task description: **Revegetate Sloped Area**

Site: **Van Egmond Stone Pit** Permit Action: 2023 Conversion M1991080 Permit/Job#: M1991080

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 12/15/2023 County: Teller Filename: M080-004
User: ERR

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			$	$
			Total Fertilizer Materials Cost/Acre	**$0.00**

Application

Description	Cost /Acre
	$
Total Fertilizer Application Cost/Acre	**$0.00**

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	$117.61
Total Tilling Cost/Acre	**$117.61**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Rye, Annual Tetraploid - Barmultra	7.84	34.20	$15.13
Mountain Brome - Bromar	5.96	9.58	$35.86
Streambank Wheatgrass - Sodar	7.86	25.62	$65.26
Thickspike Wheatgrass - Critana	7.70	27.22	$62.74
Needlegrass, Green - Lodorm	3.98	16.54	$34.41
Siberian Wheatgrass	5.80	14.65	$38.42
Totals Seed Mix	39.14	127.80	**$251.82**

Application

Description	Cost /Acre
Broadcast seeding [DMG]	$272.56
Total Seed Application Cost/Acre	**$272.56**

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			$	$
Total Mulch Materials Cost/Acre				**$0.00**

Application

Description	Cost /Acre
	$
Total Mulch Application Cost/Acre	**$0.00**

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					$
Totals Nursery Stock Cost / Acre					**$0.00**

JOB TIME AND COST

No. of Acres: 11.37
Estimated Failure Rate: 35%
*Selected Replanting Work Items: TILLING,SEEDING

Cost /Acre: $641.99
Cost /Acre*: $641.99

Initial Job Cost: **$7,299.43**
Reseeding Job Cost: **$2,554.80**
Total Job Cost: **$9,854**
Job Hours: **17.06**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mob/Demob of Reclamation Equipment**

Site: **Van Egmond Stone Pit** Permit Action: 2023 Conversion M1991080 Permit/Job#: M1991080

PROJECT IDENTIFICATION

Task #: 005 State: Colorado Abbreviation: None
Date: 12/15/2023 County: Teller Filename: M080-005
User: ERR

Agency or organization name: DRMS

EQUIPMENT TRANSPORT RIG COST

Shift basis: 1 per day
Cost Data Source: CRG Data

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED, 400 HP (2ND HALF, 2006)

Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T)

Cost Breakdown:

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	$10.44	$22.18	$23.94
Operating Cost/Hour:	$26.48	$54.55	$55.65
Operator Cost/Hour:	$22.52	$22.52	$22.52
Helper Cost/Hour:	$0.00	$23.53	$23.53
Total Unit Cost/Hour:	$59.44	$122.78	$125.64

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
Cat D8T - 8SU	53.08	$187.85	$125.64	1	$313.49	$125.64	$250.00
Drill/Broadcast Seeder with Tractor	25.00	$41.02	$59.44	2	$200.92	$118.88	$250.00
CAT 14M	23.57	$129.81	$59.44	1	$189.25	$59.44	$250.00
Subtotals:					**$703.66**	**$303.96**	**$750.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	$130.54	2	$261.08	$261.08
Subtotals:			**$261.08**	**$261.08**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	COLORADO SPRINGS	
Total one-way travel distance:	48.70	miles
Average Travel Speed:	45.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$4,384.60	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$565.09	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.08	1.08
Return Time (Hours):	1.08	1.08
Loading Time (Hours):	0.25	NA
Unloading Time (Hours):	0.25	NA
Subtotals:	2.66	2.16

JOB TIME AND COST

Total job time:	**5.33**	Hours
Total job cost:	**$4,950**	